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EXAMINER

DIVINE, LUCAS

ART UNIT PAPER NUMBER

2624

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/921,556		ABE, YOSHINORI	
	Examiner		Art Unit	
	Lucas Divine		2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-23 and 39-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-23 and 39-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claims 1 – 6, 8 – 23, and 39 – 44 are pending.
2. No amended specification has been found associated with this amendment. Applicant notes on page 11 of remarks that specification has been amended to address Office Action's objection to Fig. 9. But since no specification has been found as submitted with this amendment, drawing objection maintained.
3. § 101 rejections withdrawn due to adequate amendments.
4. Examiner feels there are still remaining clarity issues in this case that were not cleared up with amendment or have been introduced with the new amendments to the claims. Thus, to help Applicant better understand retained and new § 112 (2) rejections as well as to help Applicant overcome these rejections with clear, understandable, definite claims that particularly point out what the applicant considers the invention, Examiner will add a brief italicized section at the end of each § 112 rejection to help understanding of rejection and give possible suggestions for the claims. There may be novel and/or non-obvious features in the claimed invention, but these cannot be determined until the claims are clear and definite as to what is being claimed.

Further, if Applicant would like to discuss the case, Examiner suggestions, and/or draft claim amendments for possible future responses, Applicant is encouraged to schedule an interview with Examiner so that § 112 issues may be reduced or eliminated in possible future responses.

5. § 112, second paragraph, rejection of claim 16 is maintained due to no fixing of the issue, issue thus is explained further in the rejection below.

Response to Arguments

6. Applicant's arguments filed 7/12/05 have been fully considered but they are not persuasive. Title of Invention does not in any reasonable way clearly indicative of the invention to which the claims are directed. Thus, objection will be maintained until the title has been amended to overcome the objection.

7. Applicant's arguments filed 7/12/05 have been fully considered but they are not persuasive. For Roberts reference, the arguments are moot in view of new grounds of rejection. For Yamanaka reference, Examiner states that in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Yamanaka teaches warming up a printer ahead of time when it is known that the printer will be needed for the printing operation. Thus, in combination with a cluster printing system, the combined system would be a cluster printing system including the ability to have devices go into sleep state and be woken up by a remote command. Thus, the rejections previously and in this Action are based on the combination of references and applicant cannot show nonobviousness by attacking Yamanaka individually.

DETAILED ACTION

Drawings

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8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **S2**.

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: from Fig. 9 – **S902**.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

10. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

11. Claim 20 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the

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claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 20 claims the computer readable medium of claim 14. Claim 14 is amended to be on a computer readable medium. Thus, claim 20 does not further limit claim 14 anymore and is objected to accordingly.

Examiner suggests canceling claim 20 because it adds nothing to the claims.

12. Claims 5, 12, and 18 are objected to because of the following informalities: "an allocation of job" seems just to be written in unclear English. It appears that the applicant is referring to 'an allocated portion of the job' because later in the claim the 'allocation of job' to each device in stand-by is more than to the energy saving state.

Appropriate correction is required.

Examiner suggests amending 'an allocation of job' to 'an allocated portion of the job' which would be more proper English in what Examiner believes the invention is directed to.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 21, 22, and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

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claimed invention. These amended claims introduce new matter lacking support in the specification.

As currently written, the network device can go into sleep state 1) when conditions are met and/or 2) if the device is part of a cluster operation when an external instruction is transferred to it. There is not support for this in the claims or in the specification.

Specification page 45 lines 19-21 clearly state: ‘... **if incorporated into the cluster system, the multi-function device does not transfer to sleep state**’ but transfers on an external instruction.

The current claims include the language ‘irrespective of said conditions’ which just means that the instruction from an external device can send the device into an energy saving state not matter what state it is in, irrespective of said conditions.

Examiner believes Applicant is trying to claim the invention described at least partially on page 45 as cited above. Examiner thus suggests, for non-new matter purposes, something like:

A network device in which a cluster operation can be realized in cooperation with a plurality of network devices, comprising:

a determination portion for determining whether the network device is included in a cluster system, wherein the determination is made when conditions, being intrinsic to the device itself, for transferring to an energy saving state are met;

a state transfer portion for transferring the network device to an energy saving state; and

wherein if the determination portion determines that the network device is included in the cluster system the state transfer portion only transfers the network device to an energy saving state in accordance with an instruction from an external device, irrespective of said conditions.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 1, 4, 8, 11, 14, and 17 (and thus their dependents) and claim 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 8, and 14, the amended claim includes multiple instances of indefiniteness.

1) What is 'based on a determination by the determination portion'? Is it the transfer in the device from energy saving state to a stand-by state? Is the restoring somehow based on the determination? Thus, it is unclear and indefinite what is 'based on a determination' and the claim is rejected for at least this reason.

2) What devices are distributed to? In the distribution portion limitation, the distribution portion 'distributes a job to each device'. Each device in the whole system? Each device in the cluster operation? Each device restored? Each device in stand-by? Devices are discussed in all of the limitations and a required number of devices is also discussed. Thus, some of the devices in the system may not be required in the cluster operation. Further, the limitation before specifically discusses restoring devices from energy saving state, and therefore the nearest

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devices in the claim that may be indicated could be these as well. Thus, it is unclear what is meant by 'distributes a job to each device' and the claim is rejected for at least this reason.

3) Is the distribution based on: (a sum of the number of devices in stand by state) and (the number of devices transferring to the stand-by state by said restoring portion reaching said required number) or a sum (of the number of devices in the stand-by state and the number of devices transferring to the stand-by state by said restoring portion) reaching said required number. For example, in the first case, if the required number is 7 total devices needed for the cluster operation and 5 were already in stand by, the distribution would be based on 5 stand-by and 7 restored for a total of 12. Further, the term 'based on' is so broad that it could encompass that the 7 restored were selected because they were all color and none of the 5 were. So this example could make sense if it was being claimed because the required number of devices could be 7 devices, but they needed to be color because color is 'required by the cluster operation', and based on this the restoring portion restores 7 color devices because the stand-by devices are monochrome. In the second case, the claim assumes that the total number of devices in stand-by and restored would equal the number of devices required, which could also be another interpretation, but is not particularly pointed out. The claim is rejected for at least this reason.

4) Similarly, what is 'reaching said required number'? The sum of two numbers or just the number of devices transferring? This is also unclear for similar reasons as stated in 3, for which suggestions are made below. The claim is rejected for at least this reason.

Examiner suggests, for clarity purposes, possibly something like:

A control device controlling a cluster operation of a plurality of devices, comprising:

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a determination portion for determining whether a required number of devices for a cluster operation are in a stand-by state;

a restoring portion for restoring a device by transferring the device from an energy saving state to a stand-by state, wherein the restoring is based on a determination by the determination portion;

a distribution portion for distributing a job to each device in the cluster operation based on a sum of devices reaching said required number; and

wherein the sum of devices is the addition of the number of devices in the stand by state and the number of devices being restored by said restoring portion.

Example above assumes the restoring is based on the determination, each device means each device in the cluster operation, and the sum reaches the required number, and the sum is the addition is of both types of devices. If any of these interpretations is not what the applicant is trying to claim, simple adjustments to the above suggestion can be made.

Examiner suggests that in claims the decisional statement may come before the action to make the claims more clear and easy to understand. An example would be 'based on X, Y happens' or 'if X, then Y' or 'when X, then Y'. This is consistent with descriptions in drawings and specification where a decision block happens to make the decision and then the subsequent action occurs (see also example below for claim 4).

Examiner also suggests that in some cases clarity can be obtained by indentations and commas. For example, to fix item 3, to be clear on which option the applicant is trying to claim, the factors that being based on could be indented accordingly so that it is clear and definite what the distribution is based on.

There are many ways to clarify claims. One idea may be to list the physical elements (determination portion, restoring portion, distribution portion) and then list wherein clauses to state how they interact (see example for claim 4). Another may be to state the physical element and that (like is currently done) and then go to the next line, indent and clearly explain what it does.

Another suggestion would be to include the information right after what it is depending from. For example, if the 'transferring' of claim 1 is what is 'based on a determination by the determination portion', the claim could be redrafted to say "restores a device by transferring, based on a determination by the determination portion, the device from an energy saving state to a stand-by state". This clearly states that it is the transferring that is based on a determination and is thus clear and definite.

Regarding claims 4, 11, and 17, the amended claim still does not particularly point out or distinctly claim what applicant regards as the invention. In the third line, the selecting portion 'selects a number of devices'. This leads to indefiniteness as to what is being selected. Is it a number (as in claim 1) of devices from the devices in energy saving state, say 3? Is it the actual devices from among the devices in an energy saving state, say InkJet1? Lines 4-5 support that it is a number (number of devices in stand-by and required number of devices) while the distribution portion supports that the device is selected (each device ... selected). For this reason the claim is still indefinite.

Examiner suggests (if devices are selected), for clarity purposes, possibly something like:

A control device controlling a cluster operation of a plurality of devices, comprising:

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a selecting portion;

a distribution portion;

wherein if the number of devices in a stand-by state is less than the required number of devices needed for a cluster operation the selecting portion selects devices from among the devices in an energy saving state for the remaining number of devices needed in the cluster operation; and

wherein, after selection, the distribution portion distributes a job to each device in the stand-by state and each selected device in the energy saving state.

If the number of devices is implying an actual number, the claim could be rewritten similarly, but focusing on that language instead.

The word 'that' is a pronoun Examiner suggests not using (notice not in suggestion above). Applicant may still continue to use it as long as it is clear what 'that' is referring to. Just a note to watch for this.

Regarding claim 16, which depends from claim 14, claim 16 recites the limitation "**said restoring conditions**" in line 17 of page 60. There is insufficient antecedent basis for this limitation in the claim. Applicant did not amend to fix this problem. Claim 16 depends from claim 14. In contrast, similar claims 3 and 10 depend from 2 and 9, not the independent claim. Claim 15 introduces the concept of a restoring condition. The parent claim 14 does not have a restoring condition and thus there is insufficient antecedent basis for 'said restoring conditions' and the rejection is maintained.

Examiner suggests making 16 depend from claim 15 instead of claim 14.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1 – 4, 6, 8 – 11, 13 – 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan et al. (US 2001/0055123) and Yamanaka (US 6268925).

Regarding claim 1, Ryan teaches a cluster printing system, wherein Fig. 4 shows having a required number of devices for a cluster printing operation (6 in the example, wherein printers 1-6 have been selected for the cluster operation); Ryan also teaches 100 of Fig. 6 as an example of a control device, for controlling the system and distributing job to each device based on the total devices for the job.

Ryan does not specifically teach that the printers can go into energy saving mode or restoring them from such a mode.

Yamanaka teaches a restoring portion (wake-up command transmission section 72) for restoring a device in an energy saving state to a stand-by state (Fig. 4(A) teaches that if it is known that a device in a sleep mode will be needed in a certain period of time [S5], it automatically sends a wake-up command; S6) when the device is needed.

It would have been obvious to add sleep modes and the automatic awake therefrom as in the system of Yamanaka with the system of Ryan. The motivation for doing so would have

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been to save power in the devices that are not being used. Yamanaka further explains the benefits of a sleep mode in col. 1 lines 21-26.

The combination thus would automatically teach the waking up of devices that were needed (selected jobs in the cluster) for the printing operation. Therefore, 6 is the required devices needed in standby of Ryan, Fig. 4. By adding Yamanaka, the controller 100 of Ryan, would check to see if the devices were in sleep state (determination portion – determine whether 6 devices needed for the cluster operation are ready), and if in sleep state, would restore them so the job could complete. And then the job would be distributed, thus reading on all of the limitations of claim 1.

Examiner note: Art rejections based on possible interpretations to address what Examiner feels Applicants may be trying to claim.

Regarding claim 2, which depends from claim 1, Yamanaka teaches the restoring portion sets up a device restored from the energy saving state to the stand-by state in accordance with the specified restoring conditions (restoring conditions shown in step S5 of Fig. 4(A), wherein the device is restored in accordance with the conditions).

Regarding claim 3, which depends from claim 2, Yamanaka teaches restoring conditions include a warm-up time for the device to return to the stand-by state (reference time is the time it takes for the printer to wake-up; col. 5 lines 35-40) , and/or the last operation time and/or the functions provided for the device.

Regarding claim 8, the apparatus elements of apparatus claim 1 perform all of the method steps of method claim 8. Therefore, method claim 8 is rejected for the same reasons as rejected apparatus claim 1 above.

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Regarding claim 9, which depends from claim 8, the apparatus elements of apparatus claim 2 perform all of the method steps of method claim 9. Therefore, method claim 9 is rejected for the same reasons as rejected apparatus claim 2 above.

Regarding claim 10, which depends from claim 9, the apparatus elements of apparatus claim 3 perform all of the method steps of method claim 10. Therefore, method claim 10 is rejected for the same reasons as rejected apparatus claim 3 above.

Regarding claim 14, the method steps of method claim 8 are the same as the program steps of program claim 14. Further Yamanaka expressly discloses systems with processors 20, 50 and memories 52, 54, 22, 24 for performing program steps. Thus, the steps of program claim 14 are rejected for the same reasons as discussed in the rejection of method claim 8. Yamanaka further teaches a computer readable storage medium for storing computer program (Fig. 2, ROM 22 or 52 or RAM 24 or 24).

Regarding claim 15, which depends from claim 14, the method steps of method claim 9 are the same steps in the program claim 15. Thus, the steps of program claim 15 are rejected for the same reasons as discussed in the rejection of method claim 9.

Regarding claim 16, which depends from claim 14, the method steps of method claim 9 are the same steps in the program claim 15. Thus, the steps of program claim 15 are rejected for the same reasons as discussed in the rejection of method claim 9.

Regarding claim 20, which depends from claim 14, Yamanaka further teaches a computer readable storage medium for storing computer program (Fig. 2, ROM 22 or 52 or RAM 24 or 24).

Regarding claims 4, Ryan clearly teaches a distribution portion 100 for distributing a job to each device in the cluster operation (Fig. 4, wherein 6 devices are needed in the cluster operation).

Ryan does not specifically teach devices in a stand-by state.

However, Yamanaka teaches devices in a stand-by state in a printing system in order to save power and energy (Figs. 3, 4, cols. 1, 2, 5 and throughout).

It would have been obvious to allow the printers of Ryan to go into sleep state as discussed in Yamanaka. Yamanaka discusses the clear motivation in col. 1 lines 22-26.

Ryan thus teaches selecting the devices for the operation, whether or not they are in energy saving state. Thus, the selection of devices from among the devices in energy saving state is implied in the combination. Further, if all required devices are in stand-by, then no devices are in energy-saving state and none can be selected, thus the combination reads on the 'if' conditional statement of claim 4 as well. Since it would have been obvious to combine the features of Yamanaka in the system of Ryan, the selecting portion limitations would be implied in the combination and are obvious as well.

Regarding claim 11, the apparatus elements of apparatus claim 4 perform all of the method steps of method claim 11. Therefore, method claim 11 is rejected for the same reasons as rejected apparatus claim 4 above.

Regarding claim 17, the method steps of method claim 11 are the same as the program steps of program claim 17. Further Yamanaka expressly discloses systems with processors 20, 50 and memories 52, 54, 22, 24 for performing program steps. Thus, the steps of program claim 17 are rejected for the same reasons as discussed in the rejection of method claim 11. Yamanaka

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further teaches a computer readable storage medium for storing computer program (Fig. 2, ROM 22 or 52 or RAM 24 or 24).

Regarding claim 6, which depends from claim 4, Yamanaka further teaches a reference time (S5, Fig. 4(A)) that is the time for which the device in the energy saving state that is selected by said selecting portion gets to the stand-by state. And since the job wouldn't distribute until the device is woken up (S7), the distribution of the combination would be based on that reference time.

Regarding claim 13, which depends from claim 11, the apparatus elements of apparatus claim 6 perform all of the method steps of method claim 13. Therefore, method claim 13 is rejected for the same reasons as rejected apparatus claim 6 above.

16. Claims 40, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan and Yamanaka as applied to claims 1, 8, and 14 above, and further in view of well known prior art.

Regarding claims 40, 42, and 44, which depend from claims 1, 8, and 14, the combination of Ryan and Yamanaka teach the controlling device is separate from the printers themselves, and thus do not specifically teach the control device is embedded in a printer.

However, Examiner takes Official Notice that it is well known in the prior art that a printer/copier/multi-function device can act as a server and include the functions thereof.

Therefore it would have been obvious to place the control device into a printer in Ryan and Yamanaka. Thus, the system would have one less device adding power consumption,

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complexity, and space in the system, as well as other motivations well known in the art as for reasons for putting server functions in a printing device.

Conclusion

17. Examiner note: in claims 6, 13, and 19 the term 'each device' seems to be clear in that the devices that are being distributed to are the group that 'each device' belongs to. In any amendments to claims just to make sure that these claims still remain clear depending on how parent claims change because 'each device' is language that can be unclear depending on the rest of the claim (example shown in claim 1).

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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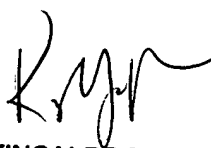
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine
Examiner
Art Unit 2624

ljd



KING Y. POON
PRIMARY EXAMINER